

Application No.: 10/502229

Case No.: 57787US006

REMARKS

Claims 1 to 56 are pending. Claims 14, 15, 16, 20 and 21 have been canceled. Claims 37 to 56 have been withdrawn from consideration. Claim 1 is amended to include the limitations of the ink-receptive surface as limited in claims 14, 15, 16, 20 and 21. No claims have been added.

112 Rejections

Claims 20 and 21 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 20 and 21 have been cancelled, and the limitations incorporated into claim 1. It is believed this renders the rejection moot.

§ 102 Rejections

Claims 1-6, 8-10, 22-24, 26-29, 33 and 36 stand rejected under 35 USC § 102(a) as being anticipated by U.S. 6,468,451 (Perez et al.). The rejection is traversed.

Perez et al. describes a fibrillated foam article prepared by fibrillating a high melt strength polypropylene foam substrate. If prepared from a uniaxially oriented foam substrate, the fibrillated article may comprise polymeric microfibers having cross-sections between 0.5 and 10 micrometers, as shown in Fig 1. Alternatively, if prepared from a biaxially oriented foam substrate, the fibrillated article may comprise a schistose (flake) structure.

The Office Action errs when asserting that Perez et al. “disclose a high melt strength oriented polypropylene foam layer suitable for use as a receptive surface for printing (column 2, lines 55-60, column 14, lines 24-25)”. It is the fibrillated article, such as depicted in Figure 1, that is purportedly useful as a printing substrate, not the precursor foam substrate. The reference suggests no utility for the foam substrate, except for subsequent fibrillation.

Further the Office Action asserts that the reference text at column 16, lines 17-24 teach Applicant’s use of a corona treatment. However, the cited text again teaches that the fibrillated article, when used as a tape backing, may be corona treated to modify the release properties.

In an effort to advance prosecution, claim 1 has been amended to recite specific ink-receptive surfaces. The reference teaches only that the fibrillated article may be used as a printing substrate, and provides no teaching or suggestion of Applicant’s ink-receptive surfaces.

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The rejection of claims 1-6, 8-10, 22-24, 26-29, 33 and 36 under 35 USC § 102(a) as being anticipated by U.S. 6,468,451 (Perez et al.) has been overcome and should be withdrawn.

Claim 11 stands rejected under 35 USC § 102(a) as being anticipated by or, in the alternative, under 35 USC § 103(a) as obvious in view of U.S. 6,468,451 (Perez et al.). The rejection is traversed.

Claim 11 may first be distinguished from the reference for the arguments previously made. Claim 11 may further be distinguished from the reference by the limitations of intervening claim 10; that the article further comprises a thermoplastic film layer. Such a composite construction of foam/thermoplastic film is neither taught nor suggested by the reference. Claim 11 may further be distinguished from the reference by the limitation of the bending stiffness.

As the reference is not directed to a multilayer article comprising a foam layer and a thermoplastic film layer, the bending stiffness is not inherent in the disclosure. In the instant claims, the bending stiffness is a desirable feature of security documents, so as to provide a feel comparable to paper documents. Such a property is not considered by the reference.

The rejection of claims 11 under 35 USC § 102(a) as being anticipated by or in the alternative under 35 USC § 103(a) as obvious in view of U.S. 6,468,451 (Perez et al.) has been overcome and should be withdrawn.

§ 103 Rejections

Claim 13 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.). The rejection is traversed.

In claim 13, the limitation of "inorganic particulate additive" refers to Applicant's disclosure at page 11, lines 13-23 that such additives enhance the roughness characteristics of the ink receptive surface. As Perez et al. do not contemplate the ink-receptive surfaces of claim 1, there is no disclosure to suggest the addition of inorganic particulate additives to enhance surface roughness.

In making the rejection, the Examiner takes Official Notice that it is common and well known to use inorganic additives in the foam material motivated by the desire to improve the mechanical properties of the foam material.

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Applicants agree that inorganic additives may have been added to foams, but the limitation is directed not to the foam, but the ink receptive surface of the article. The presence of inorganic additives in the bulk matrix of a foam would do little to enhance the surface roughness. Further, as Applicant's have argued, the foam of Perez et al. is merely a starting substrate for subsequent fibrillation. A foam containing such inorganic additives suggested by the Examiner would not likely survive the subsequent fibrillation process of Perez et al., as the high pressure water jets (or ultrasonic agitation) open up the matrix to produce the microfibers, and wash any such additives away. The Examiner is again invited to review the Figures of Perez et al.

The rejection of claim 13 under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.) has been overcome and should be withdrawn.

Claim 12 stands rejected under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.) as applied to claim 10, and further in view of U.S. 5,605,729 (Mody et al.). The rejection is traversed.

Mody et al. is directed to a storage dispensing assembly for loop fastener material used in hook-and-loop fasteners. The Examiner refers to the construction of Figure 1 which purportedly shows the construction of two foam backing layers 16 and a loop layer 14 disposed therebetween.

Mody et al. do not correct the defects of Perez et al. Applicants again assert that the instant article is directed to a foam layer, where Perez uses a foam only for subsequent fibrillation. That Perez et al and Mody et al. both contemplate hook and loop fasteners is irrelevant to the instant claims.

The rejection of claim 12 under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.) as applied to claim 10, and further in view of U.S. 5,605,729 (Mody et al.) has been overcome and should be withdrawn.

Claims 17-19, 25, 30-32, 34 and 35 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.) as applied to claims 1, 10 and 29 and further in view of U.S. 5,807,632 (Pedginski et al.). The rejections are traversed.

Pedginski et al is directed to a release coating, and articles prepared therefrom, the release coating described at column 6, line 15 to column 9, line 18. Pedginski et al. do not correct the deficiencies of Perez et al., as the graft copolymers of Pedginski et al. are not ink receptive coatings or polymers.

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Claims 17-19, 21, 31, 32, 34 and cancelled claims 15, 16 and 21 (now incorporated into claim 1) recite either an ink-receptive coating or an inherently ink receptive polymer as the ink-receptive surface of the instant article, as described on page 3, lines 6 to 14, and further described at page 9, line 13 to page 11, line 3.

The Examiner appears to conflate the instant ink-receptive coatings/polymers with the graft copolymers of Pedginski et al., as both recite ethylene/vinyl acetate copolymers. However Pedginski et al., in grafting fluorochemical segments to the reference "base polymer", which may be an ethylene/vinyl acetate copolymer, radically alters the properties of the base polymer. The graft copolymers of Pedginski et al. are "release polymers" which "provide a surface to which the adhesive coating does not permanently adhere" (column 1, lines 15 to 17). The effect of the fluorochemical graft is demonstrated in reference comparative examples 1 and 2, in which the base polymer has not been grafted with a fluorochemical, with examples 4 and 7. As can be seen, the non-grafted polymers have a significantly higher peel force than the grafted polymers.

The Examiner errs when asserting that Perez et al teach "the release coating being laminated to the fibrillated foam (column 15, lines 3-5). The recited text refers to an adhesive layer being laminated to either a fibrillated or non-fibrillated surface of the reference article. To modify Perez et al. by substituting the release polymers of Pedginski et al. defeats the intent of Perez et al – to provide the fibrillated articles with an adhesive layer. Further, if one were to make the imputed substitution, one skilled in the art would not be in possession of Applicant's invention, as neither Perez et al. nor Pedginski et al. teach or describe ink-receptive polymers or coatings. The release polymers of Pedginski et al., would provide a low energy surface (as result of the fluorochemical grafts) that would reduce ink adhesion.

Claim 25 depends from claim 10, and recites the ink receptive foam article of the invention further comprise an oriented, thermoplastic film layer. Perez et al. neither teach nor suggest an additional thermoplastic film layer, oriented or non-oriented. Pedginski et al., may not be relied upon to correct the deficiencies of Perez et al., as Pedginski et al. is directed to certain fluorochemical grafted base polymers that are used as release coatings. Pedginski et al. disclose at column 10, lines 63-65 that the reference release polymers may be coextruded with a polymeric film backing, and oriented. However to substitute the adhesive layer of Perez et al. for the release layers (release polymer coextruded with a polymer film) would defeat the intent of

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Perez et al.; to provide the subject fibrillated article with an adhesive layer. Adhesive and release layers have the opposite effect; one adheres and the other retards adhesion.

Claim 20, 30 and 33 are direct to corona treatment of the instant article for providing an ink-receptive surface. The Examiner errs, in part, when asserting the "Perez does not specifically disclose the release coating film being corona treated." At column 16, lines 21-24 the reference states "[t]he release properties of the backing can be modified by applying a low surface energy composition, priming, corona discharge, flame treatment, roughening, etching, and combinations." The construction refers to an adhesive tape construction using the fibrillated articles as a backing, an adhesive layer on one surface of the backing, and corona treatment on the opposite surface of the backing to modify the unwind properties.

The Examiner supports the rejection by reference to Examples 11 and 12 of Pedginski et al. The indicated examples teach that corona treatment may be used to improve adhesion between the polypropylene film layer and the resulting adhesive layer. The release polymer of Pedginski et al. is coextruded on the opposite side of the adhesive layer. Again, the release polymers of Pedginski et al. are not ink-receptive layers as required by the instant claims. Were one to corona treat the article of Perez et al., one would still not be in possession of Applicant's claims, as Perez et al. is directed to a fibrillated article prepared from a foam, and use of the foam *per se* is not taught or suggested.

At column 15, lines 48 to 52, Perez et al. teach a fibrillated foam backing with an adhesive coated on one side and a release coating on the opposite. The Examiner suggests substituting the construction of the Pedginski et al. (column 5, lines 29 to 65) for the release coating of Perez et al. Again, this suggested modification does not put one in possession of Applicant's claims, as the backing of Perez et al. is a fibrillated article (see Figures), and the release article of Pedginski et al. is not an ink-receptive surface.

In summary, the rejection of claims 17-19, 25, 30-32, 34 and 35 under 35 USC § 103(a) as being unpatentable over U.S. 6,468,451 (Perez et al.) as applied to claims 1, 10 and 29 and further in view of U.S. 5,807,632 (Pedginski et al.) has been overcome and should be withdrawn. Claims 2 to 36 each add additional features to claim 1. Claim 1 is patentable for the reasons given above. Thus, claims 2 to 36 are likewise be patentable.

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Double Patenting Rejections

Claims 1-36 stand provisionally rejected judicially-created doctrine of obviousness-type double patent in view of claims 1-33 of Applicant's copending application 10/502,210. This rejection is respectfully traversed for the following reasons:

Enclosed is a "Terminal Disclaimer Under 37 C.F.R. Section 1.321(b)," which disclaims the portion of the term of any patent granted on the instant application that would extend beyond the expiration date of the term of 10/502,210. The Disclaimer also indicates that the instant application and U.S. 10/502,210 are commonly owned by 3M Innovative Properties Company by virtue of assignments recorded on 07/21/2004 at Reel 016381, Frame 0676/79, for the instant application and on 7/21/2004 at Reel 15880, Frame 655/58, for U.S. 10/502,210. Both the instant application and U.S. 10/502,210 claim priority to Application No. 10/175,020, with an assignment recorded at Reel 13034, Frame 175/78 on 6/18/2002. The Disclaimer further indicates that the chain of title of the instant application has been examined in order to comply with 37 C.F.R. Section 3.73(b).

Since under 37 C.F.R. Section 1.78(d) a terminal disclaimer in compliance with 37 C.F.R. Section 1.321(b) can be used to overcome a non-statutory double patenting rejection, Applicants respectfully request that the double patenting rejections be withdrawn. In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Allowance of claims 1-36, as amended, at an early date is solicited.

Respectfully submitted,

Date

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